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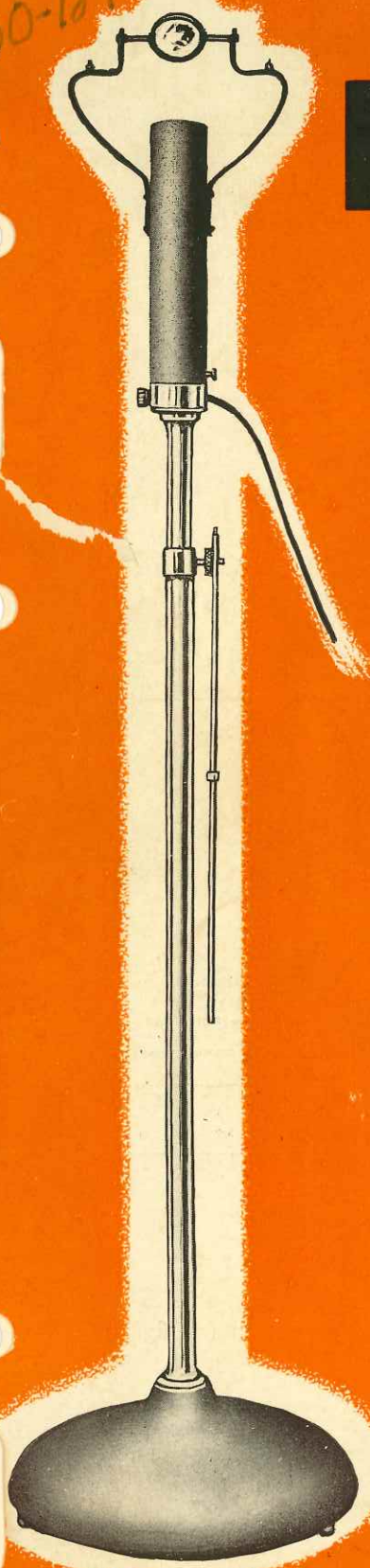
National STATOSCOPE

perfected model of Pascal Photoscope



Pascal Statoscope
(Patented)

for Absolute, Undisturbed and Unobstructed Vision in

Static Retinoscopy

Dynamic Retinoscopy

PATENT OFFICE
AUG 18 1937
DIV. 56

also for

Measuring Objectively - Heterophoria

Measuring Objectively - Heterotropia

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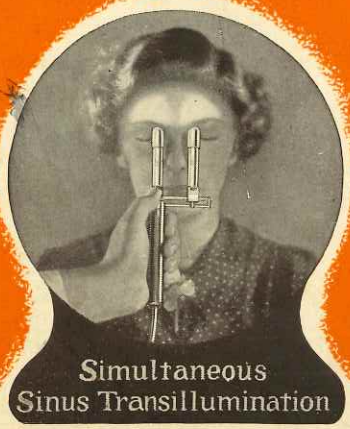
600/184

National DIAGNOSTIC INSTRUMENTS and CAUTERIES OF ADVANCED DESIGN

"Neiromuld" Ophthalmoscope with the Vest Pocket Darkroom



Twin Transillumination for Eyeballs, Pupils, Irides, etc.

Shock-proof Controller

Eye Pencil Cautery

National STATOSCOPE

perfected model of Pascal Photoscope

Sets a New Standard of Accuracy and Speed in Static Retinoscopy

Cat. No. N500 ..... $37.50 Complete with Stand

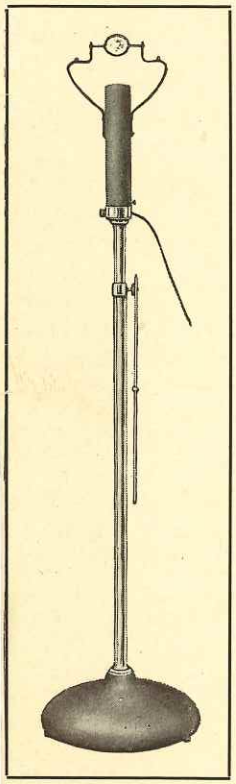


Fig. 1
Statoscope
complete with stand

PRIMARY USES:

1. Static Retinoscopy
2. Dynamic Retinoscopy

AUXILIARY USES:

3. For measuring Latent Squint
   a. With fixation at infinity
   b. With fixation at near
4. For Measuring Manifest Squint
   a. With fixation at infinity
   b. With fixation at near

THE Statoscope (patented) provides absolute, undisturbed and unobstructed fixation at infinity—assures complete relaxation of the eye under observation—and enables the refractionist to obtain the retinoscopic reflex from the center of the macular area, precisely along the visual path.

*This instrument was developed by Joseph I. Pascal, M.A., M.D., after years of research in this country and at the University of Vienna.**

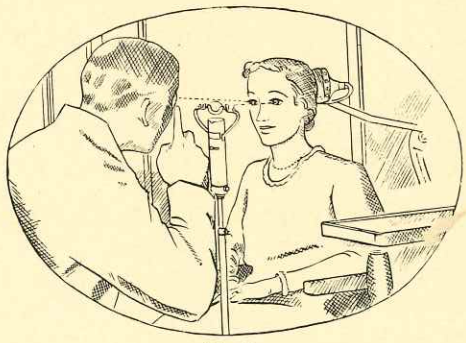


Fig. 2

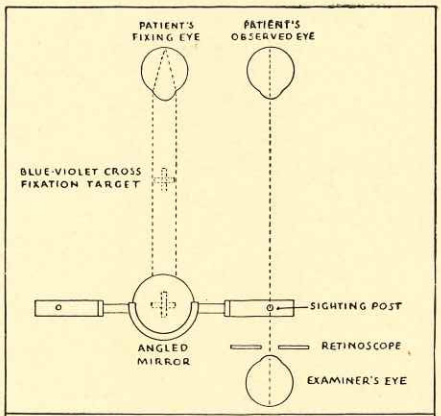


Fig 3 The STATOSCOPE IN USE FOR STATIC RETINOSCOPY

THE STATOSCOPE IN ACCURATE RETINOSCOPY

The Statoscope simplifies static retinoscopy and assures a degree of accuracy impossible to obtain with any other method. This ease and accuracy is possible only because, with the Statoscope, *the eye in fixation is not the eye under observation* (see figures 2 and 3).

The Statoscope takes advantage of the fact that accommodative relaxation induced in one eye, by fixing a distant restful target, is shared by the other eye. Where atropine is used to produce accommodative relaxation, the restful target eliminates the dazzling, uncomfortable glare.

The Statoscope removes the *two outstanding handicaps to accurate retinoscopy* by removing obliquity and accommodative effort and by eliminating objects in the visual path of the eye under observation (see figure 3).

Statoscope Retinoscopy enables the examiner to work so much more speedily that full retinal sensitivity is retained for the succeeding tests. As there is no change in fixation and no obliquity, the emergent light (reflex) from the patient's eye presents none of the aberrations otherwise experienced. Consequently, one or two movements of the retinoscope show the nature of the error without the deadening effect on retinal sensitivity, experienced with the usual, lengthier methods.

* *A full discussion of the various static and dynamic methods of retinoscopy is found in "Modern Retinescopy" by Jos. I. Pascal, M.A., M.D., for sale at the Columbia University Book Store. New York City.*

Accuracy and Efficiency Are the Most Important Requirements for Professional Prestige

ROUTINE STATIC RETINOSCOPY

with the STATOSCOPE

THE Statoscope is positioned about 20 inches in front of the patient (see figures 2 and 3). The examiner usually works about 6 inches behind the Statoscope. The Statoscope is then raised or lowered so that the mirror is in approximate horizontal alignment with the eyes of the seated patient. The lock nut (B) is tightened to secure the instrument in height adjustment. After this height adjustment has been made, minor adjustments for variations in heights can be made by slightly tilting the mirror.

A dark or partially darkened room is preferred, as the patient is less likely to be distracted by surrounding objects.

If the right eye is to be examined, the Statoscope light switch (D) is turned on and with the rotating target disc (I) turned to the extreme left, a round spot of white light is projected to the patient's left eye.

The patient's eyes are preferably closed when the white light (which acts as a guide to set the fixation accurately without asking quesions of the patient) is centered on the closed lid. The rotating target disc is then turned one notch, thus projecting a blue-violet cross.

The patient is instructed to open his eyes and look at the *distant cross.* (This cross appears very far away, giving the effect of infinity) If preferred, the carrier disc may be turned one more notch to the right and a blue-violet spot of light is projected.

The refractionist directs the light from his retinoscope above the sighting guide post, thus obtaining an unobstructed view of the completely relaxed eye, opposite the fixing eye, without obliquity.

PATENT OFFICE AUG 18 1937 DIV. 55

THE STATOSCOPE AND ITS ADJUSTMENTS

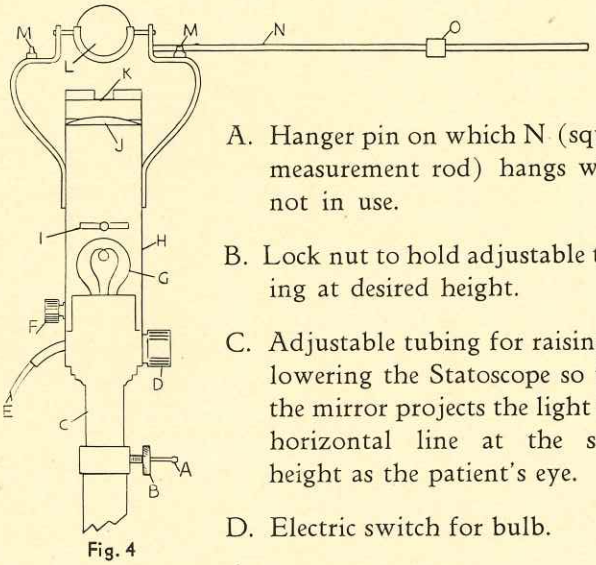


Fig. 4

A. Hanger pin on which N (squint measurement rod) hangs when not in use.

B. Lock nut to hold adjustable tubing at desired height.

C. Adjustable tubing for raising or lowering the Statoscope so that the mirror projects the light in a horizontal line at the same height as the patient's eye.

D. Electric switch for bulb.

E. Cord for attachment to electric socket.

F. Guide screw permits rotation of the tubular housing. Unscrew same and remove housing to replace bulb.

G. Special frosted bulb for 110 volt current.

H. Tubular housing—may be rotated to either side causing the mirror to project the target light at either eye of the patient without moving the Statoscope base.

I. Rotating target carrier disc—may be set to project a round spot of white light, a blue-violet cross or a round spot of blue-violet light. The white light is always used to illuminate the cardboard charts placed in the groove in front of the mirror for dynamic retiniscopy, with the fixation object in front of the retinoscope. The white light is also used when the charts are placed in the top of the tube, with the light shining thru the chart and reflected by the mirror so that the fixation object is located in the plane of the retinoscope.

J. Condensing lens providing parallel rays of light.

K. Slot in which the dynamic chart tabs fit for dynamic retinoscopy with fixation object in the plane of the retinoscope.

L. Adjustable mirror.

M. Sighting guide posts. The refractionist directs his retinoscope beam directly above these, thereby assuring examination along the visual path.

N. Squint measurement rod.

O. Sliding ring for squint measurement.

National Electric Instrument Co. 36-16 SKILLMAN AVENUE LONG ISLAND CITY, N. Y.

SUMMARY of RESULTS OBTAINED with the STATOSCOPE in STATIC RETINOSCOPY

Since the Statoscope provides a fixation object with substantially parallel rays, blue-violet in color and of very short wave length, the target appears to be very distant, thereby giving the effect of infinity. This distant target is seen only by the fixing eye. The eye under observation is in a similarly, completely relaxed condition.

It is therefore obvious that the Statoscope provides *absolute, undisturbed and unobstructed fixation at infinity.*

The Statoscope permits examination in the most natural and accurate manner, i.e. bibnocularly. Altho each eye is separately examined, both eyes are uncovered and functioning.

With other methods obliquity results, thereby introducing a false astigmatism which definitely affects the accuracy of the spherical findings.

The Statoscope eliminates obliquity of observation —the principal cause of retinoscopic inaccuracy. Examination of the macular area is made without dazzling or discomfort to the patient.

DYNAMIC RETINOSCOPY WITH THE STATOSCOPE

a. With the Fixation Object in Front of the Retinoscope.

A series of fixation charts, both of the coarse and fine focusing variety, is provided for use in dynamic retinoscopy. These charts (one at a time) are inserted in a groove in front of the mirror and illuminated by the white light from the Statoscope tube. The light is concentrated on the fixation chart and there is no stray illumination to disturb the examiner. The fixation charts are placed at any desired distance from the patient, with the examiner working as near or as far behind as he chooses. Because of the physiologic lag in dynamic retinoscopy it is desirable to "scope" a little behind the fixation target. A commonly used method is to place the fixation charts at about 13 inches and "scope" from about 16 inches, thus allowing for the usual lag of half a dioptre.

b. With the Fixation Object in the Plane of the Retinoscope.

Simply place one fixation chart at the top of the Statoscope tube with the finger tabs set in slot K, instead of placing the chart in front of the mirror. The white light shines thru the chart in use at the time and is reflected by the mirror.

Charts are stored in the recess at the back of the mirror, when not in use.

As the fixation charts are not attached to the retinoscope they are not affected by the movements of the retinoscope or the movements of the examiner. *Thus the Statoscope provides steady and undisturbed active fixation in dynamic retinoscopy as it provides steady undisturbed passive fixation in static retinoscopy.*

Measuring Heterophoria and Heterotropia (latent and manifest squint) with the Statoscope

A thin rod is provided which may be fastened to the Statoscope on either side of the mirror.

For Measuring Distance Imbalances, the patient fixes with one eye the distant blue-violet light or cross while the examiner throws a small light (from a flashlight, retinoscope or *ophthalmoscope*) into the other eye and watches the position of the tiny reflected image. He moves the light along the rod until the reflected image is in the center of the pupil of the deviating eye or in a position corresponding to the image in the other eye. A sliding ring on the rod (N and O) fixes the position. Measurements in centimeters are made from the corresponding guide post to this ring.

For Measuring Near Imbalances, the patient fixes with one eye the dynamic chart inserted in the groove in front of the mirror, while the examiner takes the measurement in a similar manner. Here, the distance measured must be taken from the centre of the mirror instead of from the corresponding guide post.

For Recording Imbalances in Prism Dioptres, the Statoscope is placed 50 cm. (20 inches) from the patient. At this distance 1 cm. represents 2 prism dioptres of imbalance.

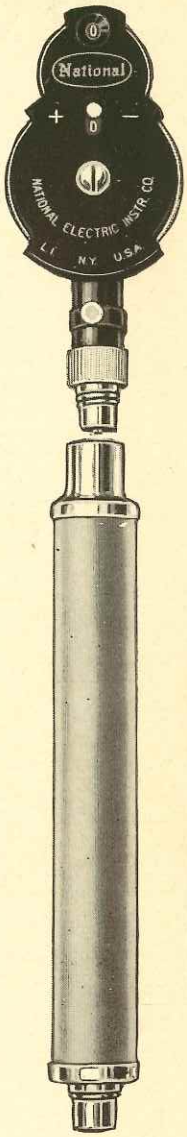
For Recording Imbalances in Angles of Deviation, the Statoscope is placed 60 cm. (24") from the patient. At this distance, one cm. represents approximately one degree of deviation up to 30 cm. Beyond that, 2 cm. represents approximately one degree of deviation.

National DOUBLE-DISC "Neiromold" OPHTHALMOSCOPE

with "VEST POCKET DARKROOM"

Compare these features with those of any other instrument . . .

The advanced design of this ophthalmoscope, results in a lens range of 96 dioptric values, plus the increasingly recognized advantages of Daylight and Red-Free Color Filters. The attractiveness of the moulded "Neiromold" construction is obvious at a glance. Smaller size, light weight, and lasting beauty are achieved with this design feature. The "Vest Pocket Darkroom" attachment is an exclusive National feature.



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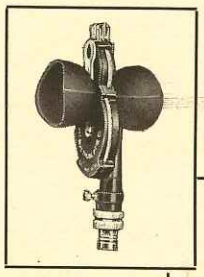
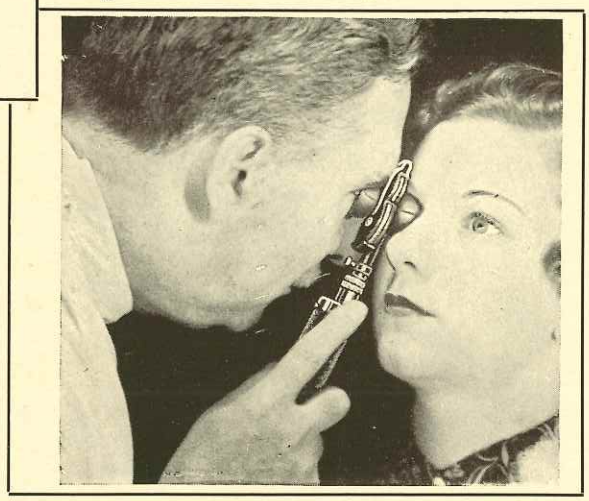
THE COMPLETE SPECIALISTS' OUTFIT

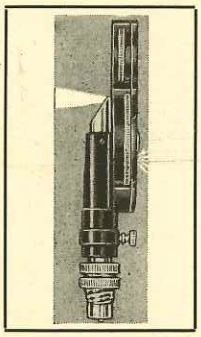
- COLOR FILTERS: Daylight and Red-Free, for sharper definition.
- LENS RANGE: Plus .5 to 70, Minus .5 to 45.
- "Neiromold" CASING: Both discs completely enclosed so that Lenses are protected from dust and dirt—No plating or oxidizing to wear off, thus assuring lasting beauty—lighter weight—smaller size.



- ILLUMINATED Zero Index shows when the large disc is located at the zero aperture—no light is required in the darkroom to find the starting point for examination.

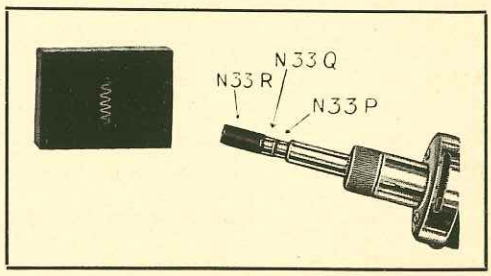


- PRISM ILLUMINATION. No shadow or glare.
- Operates on battery handle or with N 69 handle and N 65 cord, from transformer or battery box.
- The "Vest Pocket Darkroom" attachment provides darkroom diagnostic efficiency *anyplace — anytime.* Soft rubber cups provide comfort and conform to all eyes.



PLUS LENSES neutralize far-sightedness (hyperopia) of the patient's and doctor's eyes, and bring into correct focus the different elevations of the fundus and the planes anterior to the fundus. MINUS LENSES neutralize near-sightedness (myopia) of the patient's and doctor's eyes, and bring into focus, the different depressions of the fundus. CLEAR LIGHT (illumination without filter) is used for study of the average eye. The field appears to have a reddish glow. DAY-LIGHT illumination shows the fundus in its normal color and permits *more of the retina* to be seen. This is of definite value in diabetic retinitis, atrophy, anemia and hyperemia. RED-FREE illumination results in *sharper definition* of the nerve fibres, optic disk and macular. PIN POINT illumination is of particular value for examining light-sensitive patients and for detailed study of any definite fundus area.

INSTRUCTIONS FOR FOCUSING: Remove light carrier from ophthalmoscope by loosening thumb screw. Screw bulb (N33P) tightly into light carrier. Slip condensing lens cap (N33Q) over bulb. Apply current to light the bulb. Hold the end of the condensing lens 1½ to 2 inches from any flat surface and slide condensing lens sleeve back and forth on the bulb until a clear image of the bulb filament is obtained (SEE ILLUSTRATION). Place entire assembly into ophthalmoscope head and tighten thumb screw against the flat surface just sufficiently to keep the head from revolving. Slide the head up and down until a clear, circular spot of light is obtained.



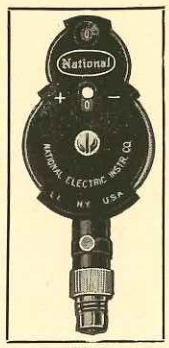
ent Co. 36-16 SKILLMAN AVENUE LONG ISLAND CITY, N. Y.

National SINGLE-DISC "Neiromold" OPHTHALMOSCOPE

Scientifically Perfect — Beautiful in Appearance

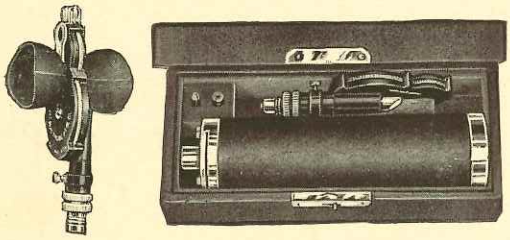
This instrument employs the same precision optics and prism illuminating system as the double-disc model, but does not include the color filters and auxiliary lenses.

- PRISM illumination— "Neiromold" casing—PIN POINT light, as well as large illuminated field—LENS RANGE: 1 to 20 Plus and 1 to 20 Minus.
- Illuminated zero index shows, in the dark, when the disc is located at the zero aperture. The operator need not use a light in the darkroom, to find the starting point for examination.
- Includes the indispensable "Vest Pocket Darkroom" (exclusive with National)



N34

National OPHTHALMOSCOPE SETS



SINGLE-DISC OPHTHALMOSCOPE SET with LARGE HANDLE

Includes: Single-Disc "Neiromold" ophthalmoscope, "Vest Pocket Darkroom" large battery-handle, and spare bulb, in plush-lined case. N2334 . . . $29.50

SINGLE-DISC OPHTHALMOSCOPE SET with MEDIUM HANDLE

Includes: Single-Disc "Neiromold" ophthalmoscope, "Vest Pocket Darkroom", medium battery-handle, and spare bulb, in plush-lined case. N2634 . . . $28.50

DOUBLE-DISC OPHTHALMOSCOPE SET with LARGE HANDLE

Includes: Double-Disc "Neiromold" ophthalmoscope, "Vest Pocket Darkroom", large battery-handle, and spare bulb, in plush-lined case. N2333 . . . $34.50

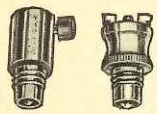
DOUBLE-DISC OPHTHALMOSCOPE SET with MEDIUM HANDLE

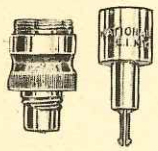
Includes: Double-Disc "Neiromold" opthalmoscope, "Vest Pocket Darkroom", medium battery-handle, and spare bulb, in plush-lined case. N2633 . . $33.50

ADAPTORS

Each - - - - - - - - - $1.50

Enables the doctor to use National instruments on battery-handles or cords of other manufacture, or to operate other instruments on his National battery-handle or cord.





Always specify the make of instruments for which the adaptor is intended.

MEDIUM BATTERY-HANDLE

N26 - - $6.00

Rheostatic control.

Smaller than N23.

Attractively finished in brown, baked finish with chromium trim.

Refills with two Eveready No. 935 cells.

LARGE BATTERY-HANDLE

N23 - - $7.00

Has binding posts that *accept cord tips of all sizes.*

Rheostatic control provides delicate voltage regulation.

Handsomely finished in brown, baked finish and chromium.

Refills with 2 Eveready No. 950 cells.

N33	Double-Disc "Neiromold" Ophthalmoscope head with "Vest Pocket Darkroom"	$24.50
N34	Single Disc "Neiromold" Ophthalmoscope head with "Vest Pocket Darkroom"	19.50
N33P	Ophthalmoscope Bulb (fits either N33 or N34)	1.25
N33Q	Condensing Lens Cap (fits over N33 P Bulb)	1.75
N33R	Pin-Point light Cap (fits over N33 Q Cap)	.50
N69	Diagnostic Handle (shown in illustration) for use with N65 Cord and Transformer	2.75
N65	Boilable, lightweight, flexible cord (7½ ft.) fastens to N69 Handle or directly to instrument heads	2.50

National TRANSFORMER for ALL DIAGNOSTIC LIGHTS and EYE CAUTERY ELECTRODES

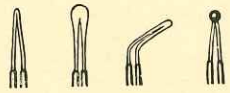
Cat. No. N544 ..... $15.00

- Delicate voltage control for operating all diagnostic lights and for varying the heat of cautery tips. Output of 1½ to 7 volts for all instrument bulbs including heavy, automobile filament type.
- A *sturdy*, silent unit in a rich, walnut "Bakelite" case. Built for a life-time of service. The last word in appearance and manufacturing efficiency.
- Transformer delivers a ground-free current for the *safe* operation of all illuminated instruments.

PATENTED AUG 18 1936 DIV. 65

National PENCIL TYPE EYE CAUTERY

Developed with the cooperation of the L. I. College of Medicine, Department of Ophthalmology

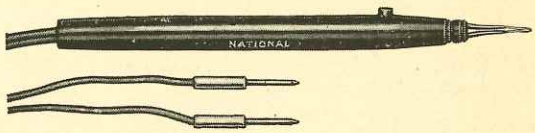


Na Nb Nc Nd

An excellent handle for the most delicate eye cauterizations, with a convenient and easily operated button switch.

The carefully designed platinum electrodes cover all requirements.

N505 Cautery Handle with cable	$ 5.50
N506 Cautery Handle with 4 platinum electrodes	17.50
Na, Nb, Nc platinum cautery tips, each	3.25
Nd, Ball platinum tip	5.50



SHOCK - PROOF CONTROLLER

N560 - - - - - - - - - $8.50

Operates all diagnostic instruments, except those using very heavy filament automobile type bulbs. Split plug fits wall outlet or screw socket.

Large control knob permits fine voltage adjustment for delicate bulbs.

Friction posts accept all cord tips —no set screws.

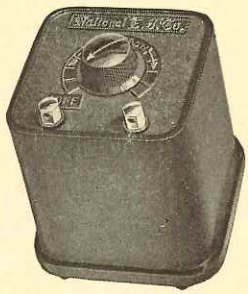
110 V-50-60 cycle (add $1.00 for 25 cycle)

NON-HEATING ATTRACTIVE

National BATTERY-BOX

N550 - - - - - - - - - - - $7.50

An Attractive Battery Current Controller for Twin Transilluminators, Ophthalmoscopes, Retinoscopes and other instruments.

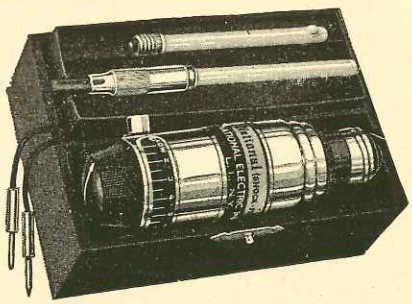


Molded "Bakelite" case 3¼" x 3¼".

Delicate voltage control.

Refills with 4 large flashlight cells.

Absolutely no danger of shock!



National TRANSILLUMINATING SET

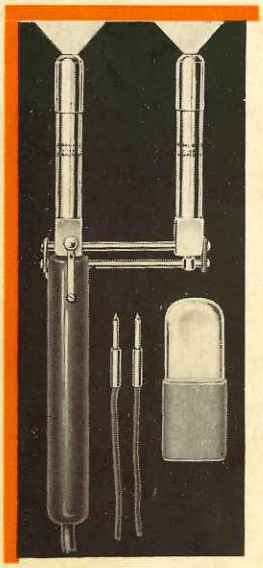
Cat. No. N562 ..... $16.50

- Boilable, Glass Transilluminators deliver a cool, brilliant light.
- Excellent for sinus, antrum and mastoid abnormalities.

N66 Side Lens Glass Transil. Lamp	$1.75
N67 End Lens Glass Transil. Lamp	1.50

Twin Transillumination by National A Sensational Innovation

Simultaneous Transillumination of BOTH — Sinuses, Eyeballs, Pupils, Etc.



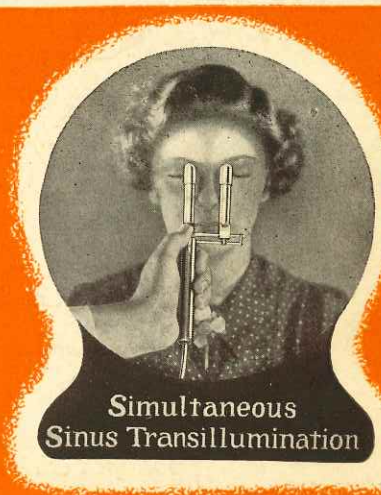
(By Dr. Louis H. Schwartz)

- The ONLY transilluminator assuring *real Antrum penetration* because of the *combined intensity* of two lamps, instead of the usual single bulb. (See illustration showing glass sheath over both lights and placed in the mouth.)
- The ONLY instrument showing BOTH—Anterior chambers, conjunctivae, Irides, Pupils and Eyeballs, at the same time, for *positive* study and comparison.
- Light carriers are slidably adjustable to compensate for all variations in facial measurements.
- Employs standard flashlight lamps, *no costly "special bulbs."* Bulb savings alone, pay for this instrument in short order.
- The ONLY transilluminator that covers *every requirement*, as one bulb may be removed so that the instrument can also be used as a *single transilluminator*.

National N580 TWIN TRANSILLUMINATOR (patent pending) complete with spare bulbs, bulb hoods, glass sheaths, push-button switch and 7½ ft. cord (in a compact box). Operates from standard transformers or battery boxes $12.50

N80 AF	Selected No. 14, 2.5 volt flashlight bulbs for Twin Transilluminator	4 for	$ .75
N80 AE	Aseptic, Glass Antrum Sheaths with rubber light shield	4 for	1.50
N80 SP	Selected No. 13, 3.8 volt flashlight bulbs for Twin Transilluminator	4 for	$ .75

UNIQUE —PRACTICAL—ENSURES POSITIVE DIAGNOSIS



INDISPENSABLE
for
Accurate Diagnosis

National "ALL-METAL" TRANSILLUMINATORS

- Hooded lamps permit *no side glare* or diffusion—remarkable penetration results—bulbs remain cool—boilable.
- All-metal construction—practically unbreakable—*eliminate costly replacements*—chromium plated.
- Operate directly from a battery-handle or transformer.

N70	Curved "All-Metal" Transilluminator with either 2.5 or 3.8 volt bulb	$4.75
N76	Right Angle "All-Metal" Transilluminator with either 2.5 or 3.8 bulb	4.75
N71	Straight "All-Metal" Transilluminator with either 2.5 or 3.8 volt bulb	4.75
N72	2.5 Volt Bulb (fits 70, 71 or 76) for battery-handle operation	1.25
N73	3.8 Volt Bulb (fits 70, 71 or 76) for transformer and battery box operation	1.25
N65	Boilable Rubber Cord (7½ ft.—flexible and light in weight)	2.50
N68	Laryngeal Mirror Attachment (fits N71 Transilluminator)	1.00